

ADD A¹ -> What is claimed is:

1. In a backpack of the type having front and rear panels joined together along the side margins and at least the bottom thereof to define a bag, the improvement comprising:

a set of variably configurable, detachable shoulder straps attached to the rear panel at the terminal end and having fasteners at the free end for attachment to the front panel of the bag, whereby a person can carry a pack with greater comfort, ease and security while maintaining a compact and streamlined design.

2. The backpack improvement as set forth in claim 1 in which the shoulder straps comprise:

- a length of nylon webbing attached to the rear panel of the bag;
- a length of elastic material attached at one end to said nylon webbing, the other end of which passes through an adjustable buckle, through a crossover strap divider then back through said adjustable buckle;
- a pair of nylon webbing straps each attached at one end to separate points on said crossover strap divider opposite the elastic material, the other end of each piece of said webbing passing through an adjustable buckle attached to the back facing end of a shoulder pad;
- a pair of shoulder pads with adjustable buckles disposed at either end;
- a length of nylon webbing passing through each of the forward facing adjustable buckles of said shoulder pads;
- one half of a two part fastener attached at the free end of each length of said webbing for attaching the shoulder strap assembly to the front, back facing panel of the bag;
- the other half of said two part fastener attached to the front panel of the bag for attaching said shoulder strap assembly to said bag, and;
- a laterally extending pouch for receiving and storing said shoulder straps, opening at the top and having closure means, said pouch being disposed at the rear panel of the bag.

3. The backpack improvement as set forth in claim 1 in which the shoulder straps have pads comprising:

- an inner closed cell foam pad;
- an outer covering of coated nylon;
- an adjustable buckle at each end.

4. The shoulder strap assembly as defined in claim 2 wherein the elastic material is a piece of rubber.

5. The shoulder strap assembly as defined in claim 2 wherein the elastic material is a piece of woven elastic.

6. The shoulder strap assembly as defined in claim 2 wherein the elastic material is a metal or plastic spring.

7. The shoulder strap assembly as defined in claim 2 wherein the elastic material is a spring loaded automatically retracting spool utilizing cord or wire.

8. The shoulder strap assembly as defined in claim 2 wherein the fastener for attaching the assembly to the front panel of the bag is a quick release adjustable buckle.

9. In a pack for transporting items the improvement comprising :

a retractable shoulder strap assembly attached at one end to the rear panel of said pack, disposed longitudinally and tangentially to the wearer's back, able to be passed over the shoulders and attached at the other end to the front back-facing panel of said pack to provide auxiliary load support and stabilization which is easily adjustable to conform to different load characteristics and user body types when transporting items in various recreational and vocational applications.

10. The pack improvement claimed in claim 9 wherein the shoulder strap means comprises :

a pair of elongated support members each with one half of a two part adjustable fastener attached to their free ends for attachment to the front back facing panel of said pack and their terminal ends attached at a point between the wearer's shoulder blades to a third longitudinally oriented elongated support member with the other end of said elongated support member attached to the center section of the rear panel of said pack; and, the other half of said two part fasteners attached to the lower side margins of said front back facing panel for receiving and securing said shoulder strap means.

11. The pack improvement claimed in claim 9 in which the rear elongated support member, when deployed in it's operational state, possesses inertial dampening means for absorbing the kinetic energy created when the wearer is engaged in vigorous exertions which cause movement of said pack upwardly and downwardly on the longitudinal axis.

12. The pack improvement claimed in claim 9 possessing the capability to be substantially detached allowing said assembly to be stored neatly and unobtrusively when not employed in it's operational mode.

not disclosed

13. In a universally adjustable pack the innovation comprising:
in combination, a pliant sided bag sized and adapted to be carried over the
wearer's back, including the lumbar region, a pair of forwardly tapered belt
sections each comprised of a pair of nylon straps forming an isoscelean triangle,
the base of the triangle being attached to the front back-facing panel of the bag,
and the apex of the triangle attached to strap means which interconnects said belt
halves to form a waist encircling belt, a retractable shoulder strap assembly
attached to the rear panel of said bag, able to be passed over the shoulders and
attached to the front back-facing panel of the bag to provide auxiliary load
support.

14. The backpack improvement as set forth in claim 13 in which: viewing the
wearer in profile with the pack positioned in the small of the back just above the
wearer's buttocks the shoulder straps when deployed in their operational mode
describe a line starting at their point of attachment to the center section of the
rear panel of said pack, and arcing upwardly and forwardly over the wearer's
shoulders thence downwardly and rearwardly to a point of termination on the
lower side margins of the front panel of said pack, said described line being
roughly bell shaped.

15. The improvement as claimed in claim 13 whereby said shoulder strap
assembly when deployed in it's operational configuration is attached at it's
terminal end to the rear panel of said pack in such a manner that said shoulder
strap assembly serves to pull the pack not only up but also into the wearer's back
such that it substantially maintains said pack in a consistent position on the
longitudinal and horizontal axis relative to the body of the wearer.